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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,795	02/15/2001	Francis J. Bensur	9325-37	3418

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EXAMINER

NOLAN, SANDRA M

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 08/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicant(s) 09/783,795	Applicant(s) BENSUR, FRANCIS J.	
	Examiner Sandra M. Nolan	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claims

1. Claims 1-23 are pending.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on May 18, 2001 (Paper No. 2) was considered by the examiner.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- WJD
4. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 says that the bonding (presumably between layers in the sheet of claim 3) is effected by welding of the polypropylene. However, claim 3, from which claim 9 depends, says that an adhesive is used to bond those layers. Please clarify.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5, 7, 11-17, 19-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al (US 5,763,028) in view of Qian et al (US 6,407,155).

Matsumoto teaches articles packaged in packaging bags (abstract). The bag comprises a laminated sheet, shown in Figure 1, having the layers **1/4/2/3/6/5**, wherein:

- 1** is a polypropylene (PP) layer (col. 4, line 58);
- 4** is an adhesive urethane layer (col. 6, lines 17 and 22);
- 2** is an oxide layer having barrier properties (col. 4, line 62 and col. 5, line 29);
- 3** is a polyamide layer (col. 4, line 32);
- 6** is another adhesive layer (col. 6, line 38); and
- 5** is a polyester layer (col. 6, line 32).

It teaches that polyethylene terephthalate is conventionally used as a layer in such laminates (col. 4, line 64). It teaches sterilization of the bags at 121 °C. (col. 7, line 27).

A pouch is deemed to be a bag.

A sheet is deemed to be a film.

Matsumoto fails to teach the use of the bag to prevent the ingress of bacteria (per Applicant's claim 12) or the use of quaternary onium salt-treated montmorillonite clay as a component in the urethane adhesive.

Qian teaches quaternary onium (col. 9, line 34) treated montmorillonite clays (col. 1, lines 32+ and col. 11, line 54) and their use with urethanes (col. 14, line 37) in films (col. 20, line 48) and film laminates (col. 20, line 64) having improved barrier properties (col. 21, lines 23+).

The patents are analogous because they both deal with polymeric films.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ the treated clays of Qian in the laminated sheets of Matsumoto in order to improve the barrier properties of the sheets.

The motivation to employ the clays of Qian in the sheets of Matsumoto is found at col. 21, lines 23+ of Qian, where the barrier properties of Qian's films are taught.

It is deemed desirable to make packaging sheets having good barrier properties in order to protect the packaged articles from the action of harmful gases and other agents or substances, such as bacteria.

In the absence of convincing objective evidence to the contrary, the use of PET in the outer layer (i.e., layer 5) of the sheets suggested by the combination of Matsumoto and Qian would have been a matter of engineering choice, depending upon the properties desired in the final sheet.

In the absence of convincing objective evidence to the contrary, the use of the sheets suggested by the combination of Matsumoto and Qian to prevent bacteria from contacting the goods packaged in bags or pouches made from the sheets would have been a matter of engineering choice.

Furthermore, use to prevent the ingress of bacteria, as recited in claim 12, is a matter of intended use and does not serve to render claims to the laminated sheets patentable over the combined teachings of Matsumoto and Qian. It has been held that a recitation with respect to the manner in which a claimed invention is intended to be employed does not differentiate the claimed invention from prior art satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

7. Claims 6, 8, 9, 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto and Qian as applied to claims 1-5, 7, 11-17, 19-21 and 23 above, and further in view of Ohsima et al (US 4,903,841).

Matsumoto and Qian are discussed above. They fail to teach cast PP, seams having facing PP layers or the welding of PP.

Ohsima teaches food pouches (col. 1, lines 5-7) having a laminated structure (Figure 3) including a cast PP layer for heat sealing (col. 3, lines 24-25). The pouches also have an outer layer made of polyester (Figure 3, feature 10; col. 3, line 10).

The three patents are analogous because they all deal with packaging laminates.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ the cast PP layer from the laminate of Ohsima in order to provide a heat sealable layer on the laminated sheets suggested by the combined teachings of Matsumoto and Qian, above.

The motivation to employ the cast PP layer of Ohsima as a heat sealable layer is found at col. 3, lines 24-25 of Ohsima, where the heat sealability of cast PP is taught.

It is deemed desirable to incorporate a heat sealable layer into the sheets suggested by the combination of Matsumoto and Qian, above, in order to facilitate the production of pouches and other seamed articles therefrom.

The use of two facing layers of cast PP would be an obvious way to facilitate the production of heat seals, since PP is heat sealable to itself.

The term "welding" is deemed synonymous with heat sealing.

K 8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto and Qian as applied to claims 1-5, 7, 11-17, 19-21 and 23 above, and further in view of Kunz et al (US 5,387,449) and Sentendrey (US 5,486,408).

Matsumoto and Qian are discussed above. They fail to teach the use of two component polyurethane adhesives derived from diisocyanates and diols.

Kunz teaches the use of two component, solvent free polyurethane adhesives (col. 6, lines 6-11) in packaging films having barrier layers as well as polyester and polyolefin layers(abstract). The films are useful for packaging foods (abstract).

Sentendrey teaches laminated sheets including two-part urethane adhesives comprising isocyanate-terminated polyesters and polyol-terminated polyesters (col. 4, lines 8-29, especially lines 27-29).

All of the cited patents deal with polymeric laminates.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ the two-part polyurethane adhesives taught by Sentendrey as adhesives in order to bond the layers of the laminated sheets suggested by the combination of Matsumoto and Qian, above, since Kunz teaches that such adhesives can be used to make packaging films for foods.

The motivation to employ the two-part polyurethane adhesives of Sentendrey is found at col. 6, lines 6-11 of Kunz and in the Kunz abstract, where two-part polyurethane adhesives are said to be solvent free and useful for making food packaging films, respectively.

It is deemed desirable to make food packaging using the two-part isocyanate/diol derived polyurethane adhesives suggested by Kunz and Sentendrey in order to effect food package production without the hazards of solvents while insuring that the laminates' layers, i.e., the layers suggested by the combination of Matsumoto and Qian, would be well adhered to each other.

In the absence of convincing objective evidence to the contrary, the use of aliphatic isocyanate-terminated polyesters as the diisocyanates in the polyurethane adhesives of Kunz/Sentendrey would be a matter of engineering choice.

Conclusion

Any inquiry concerning this communication should be directed to the Examiner, Sandra M. Nolan, whose telephone number is 703/308-9545. The Examiner can normally be reached on Monday through Thursday, from 6:30 am to 4:00 pm, Eastern Time.

If attempts to reach the Examiner by telephone are unsuccessful, her supervisor, Harold Pyon, can be reached at 703/308-4251. The general fax number for the art unit is 703/305-5436. The fax number for after final communications is 703/872-9310. The receptionist answers 703/308-0661.



S. M. Nolan
Patent Examiner
Technology Center 1700

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